



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

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January 28, 1998

MEMORANDUM TO: Whitmel H. Webb, III, PE
Manager, Program Development Branch

THRU: David G. Modlin, Ph.D., PE
Feasibility Studies Unit Head

FROM: Kim So
Feasibility Study Engineer

SUBJECT: Proposed Wilkinson Boulevard Improvements
From proposed I-485 to I-77 in Charlotte
Mecklenburg County, Division 10
U-3850

The Feasibility Study Unit was asked to investigate the potential of improving the traffic carrying capacity and travel time on Wilkinson Boulevard from the proposed I-485 (Charlotte Outer Loop) to I-77 in Charlotte (see Figure 1). The project is approximately 5.5 miles (8.8 km) in length. In addition to Figure 1, there is a set of large scale mapping detailing the improvements requested by the City of Charlotte.

Due to the delay in receiving traffic data from the City of Charlotte, it was not possible to perform traffic analyses prior to the requests for the right-of-way and construction cost estimates without delaying the study beyond the anticipated One-on-One meetings. Therefore the phased improvements and their descriptions identified below are based on a previous preliminary study done by the Roadway Design Unit with the project scope provided by the City of Charlotte.

The Feasibility Study Unit has not determined the adequacy of the suggested improvements or impacts resulting from suggested street closures. The estimated costs and impacts are presented as they relate to the project scope presented by the City of Charlotte.



Phase 1

Remove the existing signals at Berryhill Road, Mulberry Church Road, and at Boyer Street. A directional crossover would be provided at the revised intersection realignment of Mulberry Church Road/ Boyer Street and Harlee Avenue/Stafford Drive intersections. The estimated cost of \$100,000 is only for removing the signals.

Phase 2

Add a 12-foot (3.7-m) wide lane on westbound Wilkinson Boulevard just east of I-77 and widen the existing structure over I-77 to 58 feet (17.7 m). With an additional lane, there would be two lanes designated for Wilkinson Boulevard and one lane for I-77 southbound. The improvements would help to eliminate the back up of westbound through traffic that currently exists during rush hour because of conflicts with traffic wishing access to southbound I-77.

It is anticipated that the widening would be contained within the existing right-of-way. The estimated cost of the project is \$2,100,000.

Phase 3

Construct a 14-foot (4.3-m) grass median from Rodwell Road to just west of I-77. Median breaks would only be permitted at the proposed directional crossovers proposed under Phase 1 and at signalized intersections. The work would be contained within the existing right-of-way. The estimated construction cost is \$2,900,000.

Phase 4

Realign Camp Green Road across from Remount Road. This realignment is currently on the Mecklenburg Thoroughfare Plan. It is estimated that this phase would require four (4) residential and one (1) business relocations. The estimated cost is \$1,710,000 (\$510,000 for right-of-way, and \$1,200,000 for construction).

Phase 5

Close existing streets to reduce the number of turning conflicts, thus increasing the through volume capacity. The City of Charlotte proposes closing Monument Street, Highland Street, Pruitt Street, Deherradora Avenue, Gray Street, and Hillview Avenue. The estimated cost is \$350,000.

Future Phase

Wilkinson Boulevard Widening

Improve Wilkinson Boulevard to a Freeway from the proposed I-485 (Charlotte Outer Loop) to the proposed Airport Connector (TIP Project U-203), a distance of approximately 1.7 miles (2.7 km). The studied typical section is a 6-lane, curb and gutter section with concrete median barriers. Each direction would have three 12-foot (3.7-m) wide travel lanes and outside and inside

10-foot (3.1-m) wide breakdown lanes. A 140-foot (42.7-m) wide right-of-way with full control of access is recommended.

The existing roadway is partly a 4-lane shoulder section with a 15-foot (4.6-m) concrete median, and partly a 6-lane curb and gutter section.

It is estimated that this project would require the relocation of 5 residences and 20 businesses. The estimated cost for widening this segment of Wilkinson Boulevard is \$16,950,000 (\$7,750,000 for right-of-way and \$9,200,000 for construction).

Service Roads

Two service roads are proposed. Service Road 1 connects Main Drive to Barry Drive north of Wilkinson Boulevard. Service Road 2 extends from Sears Drive to Little Rock Road south of Wilkinson Boulevard. Both service roads are anticipated to be 2-lane shoulder sections with 8-foot (2.4-m) shoulders on 60 feet (18.3 m) of right-of-way.

Service Road 1 is approximately 0.6 mile (1 km) in length. It is estimated that this service road would require the relocation of 5 residences and 1 business. The estimated cost for Service Road 1 is \$4,400,000 (\$2,800,000 for right-of-way and \$1,600,000 for construction).

Service Road 2 is approximately 1.0 mile (1.6 km) in length. It is estimated that this service road would require the relocation of 1 residence and no businesses. The estimated cost for Service Road 2 is \$4,700,000 (\$2,400,000 for right-of-way and \$2,300,000 for construction).

Interchange

A new connector and a diamond interchange are proposed at approximately 0.9 mile (1.4 km) east of the proposed I-485. The Connector would carry a structure over Wilkinson Boulevard. This Connector would connect Service Road 2 to Shoreline Drive and would be approximately 0.4 mile (0.6 km) in length. Full access-control is recommended at the interchange proper.

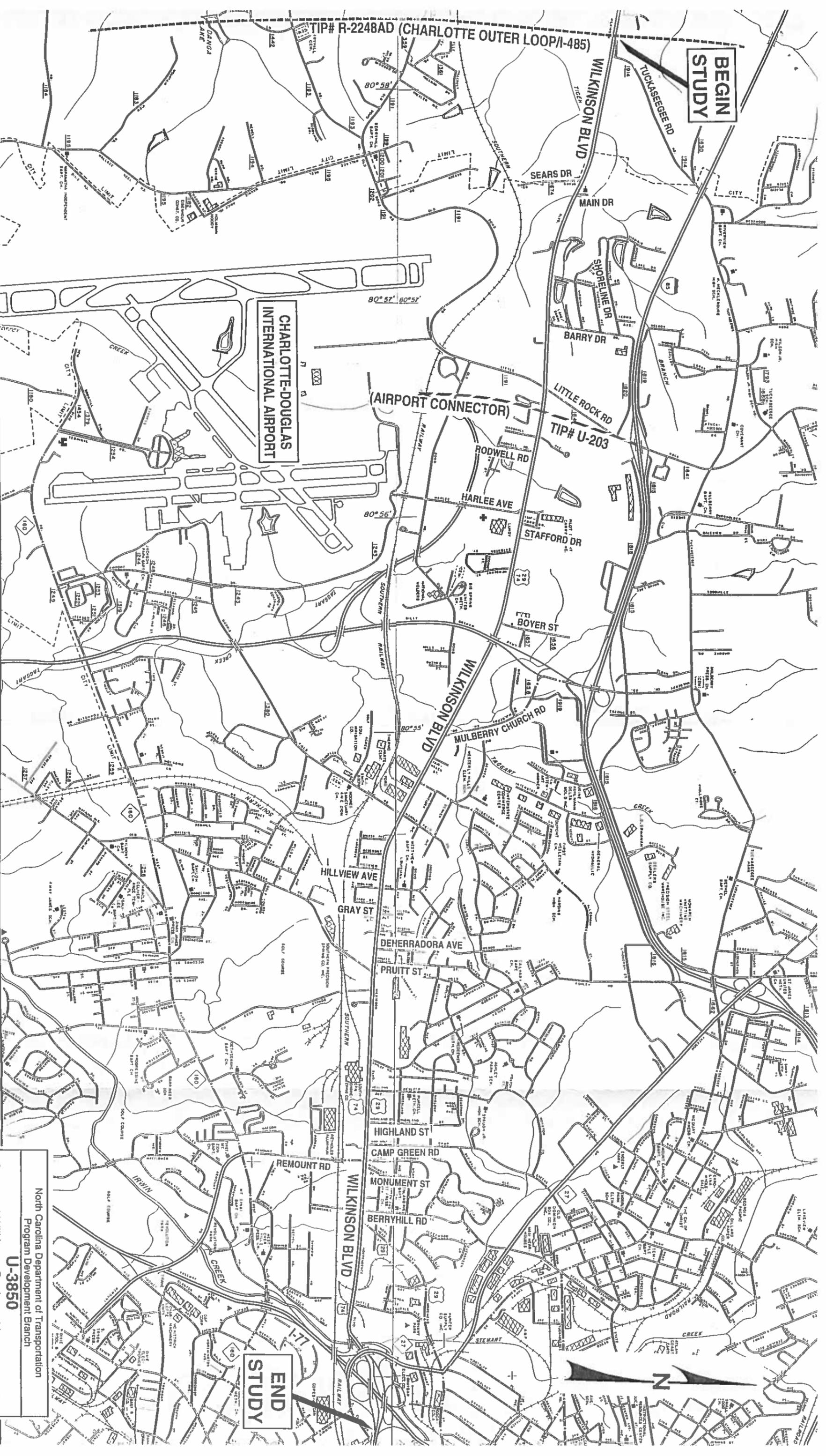
It is estimated that this the interchange with the connector would require the relocation of 5 residences and 5 businesses. The estimated cost is \$12,200,000 (\$5,100,000 for right-of-way and \$7,100,000 for construction).

Ramps

In order to allow airport-bound traffic from I-485 South to get on Wilkinson Boulevard smoothly, it is proposed to provide an additional ramp branching off the I-485 exit ramp and merging onto Wilkinson Boulevard. The estimated cost for this ramp is \$2,100,000 (\$750,000 for right-of-way and \$1,350,000 for construction). No residential or business relocations are anticipated.

An additional ramp would allow traffic on Wilkinson Boulevard to access the proposed Airport Connector which will be grade separated. The Airport Connector is programmed in the TIP as U-203. The estimated cost for this ramp is \$4,500,000 (\$3,400,000 for right-of-way and \$1,100,000 for construction). It is estimated that this ramp would require the relocation of 31 residences and 5 businesses.

No historical or architecturally significant sites have been identified in the project corridor. Based on maps available at the Department of Environment, Health, and Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.



BEGIN STUDY

CHARLOTTE-DOUGLAS INTERNATIONAL AIRPORT

(AIRPORT CONNECTOR)

TIP# U-203

END STUDY

SCALE



North Carolina Department of Transportation
Program Development Branch

U-3850

Proposed Wilkinson Boulevard Improvements
from Proposed I-485
to I-77

Charlotte, Mecklenburg County

DIVISION 10

FIGURE 1